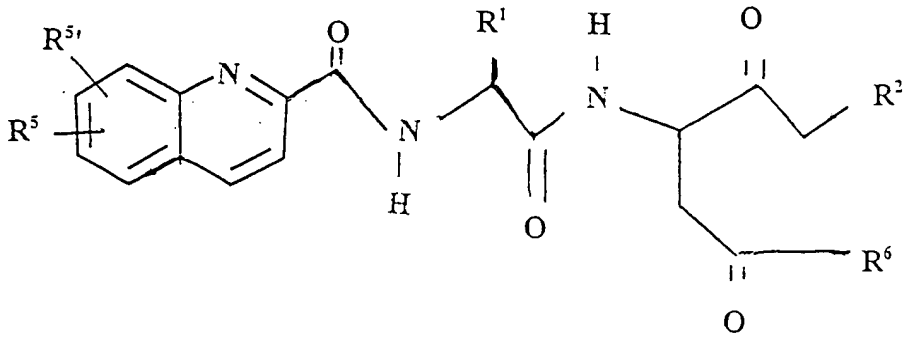
IN THE CLAIMS:

1-36. (Cancelled)

37. (Currently amended) A method of inhibiting a caspase in vivo, which method comprises:

contacting the caspase with ~~a~~ the compound of the structure:



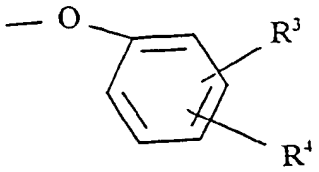
~~wherein in Structure I~~

R^1 is selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl which group -N-CH-(R^1)-(C=O)- will produce a natural amino acid structure or an unnatural amino acid structure, and;

the carbon adjacent to R^1 group is in the D or L configuration;

R^2 is selected from the group consisting of

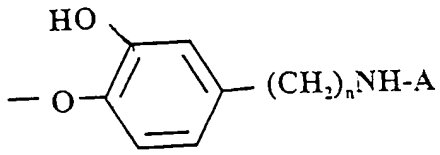
- F; and



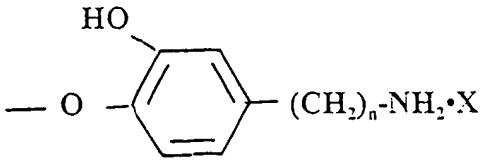
wherein R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, fluoro, chloro, carboxyl, alkoxy, alkyl carbonyl, aryl carbonyl, and amino;

and R^5 and $R^{5'}$ are each independently selected from hydrogen, alkyl, alkoxy, fluoro, chloro, carboxy, alkyl carbonyl, aryl carbonyl, amino ~~and~~ or R^5 and $R^{5'}$ together form a 5 or 6 member carbo cyclic ring structure or a 5 or 6 member heterocyclic ring structure; and

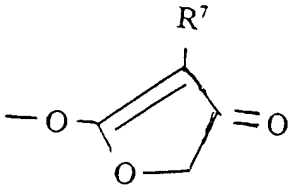
R^6 is selected from alkyl having 1 to 10 carbon atoms, aryl or substituted aryl;



wherein A is a covalently bonded amine protecting group, and n is 1-4;



wherein X is a salt, and n is 1-4; or



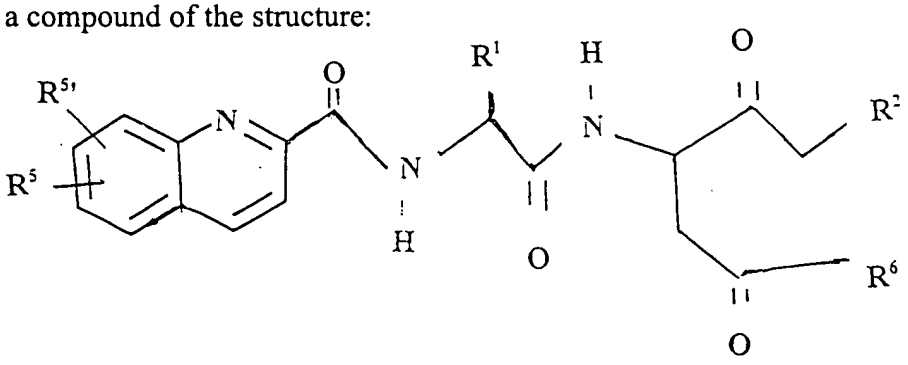
;

wherein R^7 is selected from the group consisting of alkyl having 1 to 10 carbon atoms, aryl and alkylaryl.

38. (Currently amended) A method of inhibiting apoptosis~~;~~ in vivo, which method comprises

contacting cells containing a caspase~~:~~ with

~~(a)~~ a compound of the structure:



(I)

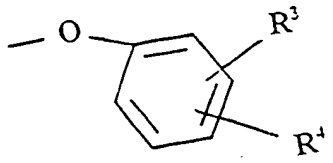
wherein in Structure I

R^1 is selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl which group -N-CH (R^1)-(C=O)- will produce a natural amino acid structure or an unnatural amino acid structure, and;

the carbon adjacent to R^1 group is in the D or L configuration;

R^2 is selected from the group consisting of

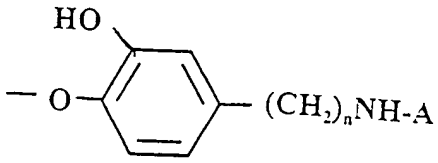
- F; and



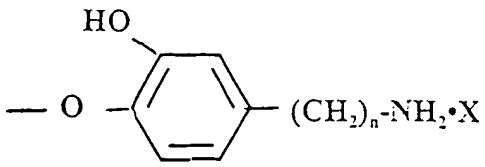
wherein R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, fluoro, chloro, carboxyl, alkoxy, alkyl carbonyl, aryl carbonyl, and amino;

and R^5 and $R^{5'}$ are each independently selected from hydrogen, alkyl, alkoxy, fluoro, chloro, carboxy, alkyl carbonyl, aryl carbonyl, amino, ~~and~~ or R^5 and $R^{5'}$ together form a 5 or 6 member carbo cyclic ring structure or a 5 or 6 member heterocyclic ring structure; and

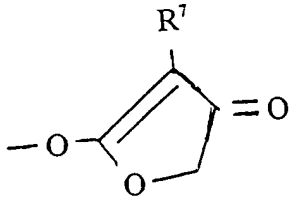
R^6 is selected from alkyl having 1 to 10 carbon atoms, aryl or substituted aryl;



wherein A is a covalently bonded amine protecting group, and n is 1-4;



where X is a salt, and n is 1-4;



;

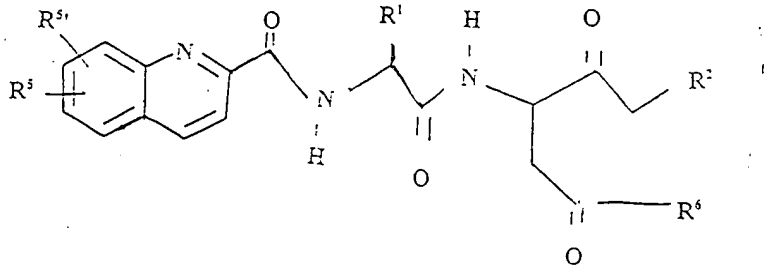
wherein R^7 is selected from the group consisting of alkyl having 1 to 10 carbon atoms, aryl and alkylaryl or the acid or base salts thereof.

39. (Cancelled)

40. (Currently amended) A method inhibition, wherein

the method comprises administration to a mammal in need of therapy of:

(a) a compound of the structure:



(I)

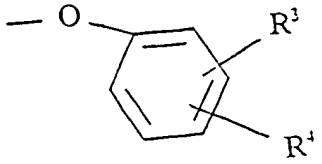
wherein in Structure I

R^1 is selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl which group -N-CH (R^1)-(C=O)- will produce a natural amino acid structure or an unnatural amino acid structure, and;

the carbon adjacent to R^1 group is in the D or L configuration;

R^2 is selected from the group consisting of

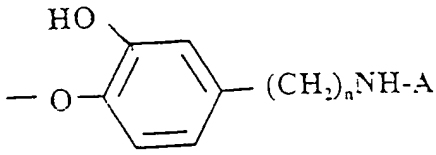
- F; and



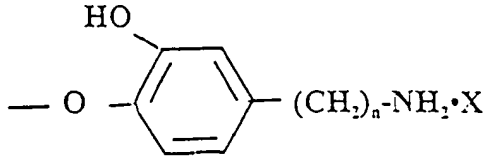
wherein R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, fluoro, chloro, carboxyl, alkoxy, alkyl carbonyl, aryl carbonyl, and amino;

and R^5 and $R^{5'}$ are each independently selected from hydrogen, alkyl, alkoxy, fluoro, chloro, carboxy, alkyl carbonyl, aryl carbonyl, amino, ~~and~~ or R^5 and $R^{5'}$ together form a 5 or 6 member carbo cyclic ring structure or a 5 or 6 member heterocyclic ring structure; and

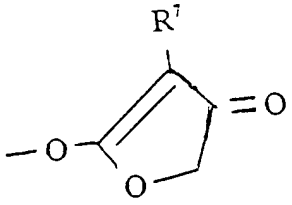
R^6 is selected from alkyl having 1 to 10 carbon atoms, aryl or substituted aryl;



wherein A is a covalently bonded amine protecting group, and n is 1-4;



where X is a, and n is 1-4;



;

wherein R^7 is selected from the group consisting of alkyl having 1 to 10 carbon atoms, aryl and alkylaryl or the acid or base salts thereof.

41. (Previously presented) The method of Claim 40 wherein in the structure:

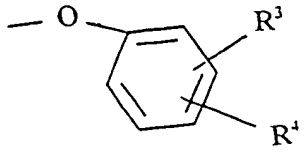
R^1 is selected from isopropyl or isobutyl;

R^2 is F ; and R^5 is hydrogen.

42. (Original) The method of Claim 40 wherein in the structure:

R^1 is selected from isopropyl or isobutyl;

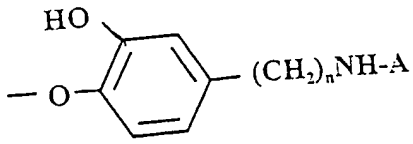
R^2 is



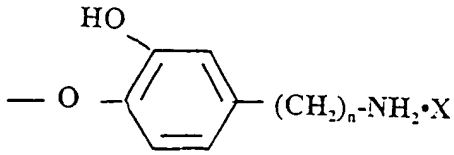
wherein R^3 and R^4 are each fluoro; and R^5 is hydrogen.

43. (Previously presented) The method of Claim 42 wherein in the structure, R^3 and R^4 in the 2 and 6 positions of the phenyl ring.

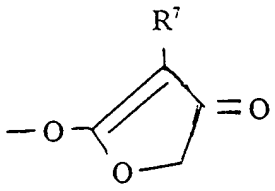
44. (Previously presented) The method of Claim 43 wherein R^2 is



45. (Previously presented) The method of Claim 43 wherein R^2 is

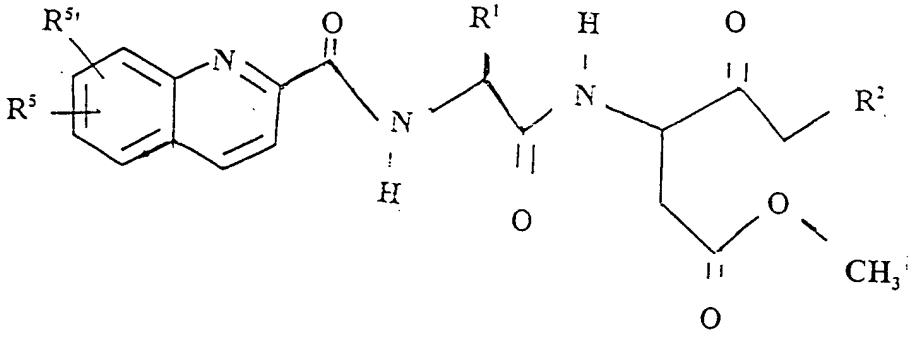


46. (Previously presented) The method of Claim 43 wherein R^2 is



47. (Currently amended) The method of claim 38 wherein the compound comprises~~,~~

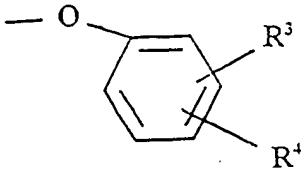
~~(a)~~ a compound of the structure:



wherein R^1 is selected from the group consisting of methyl, ethyl, isopropyl, and iso-butyl;

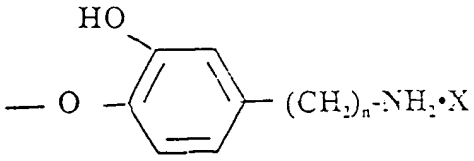
R^2 is selected from the group consisting of:

-F or

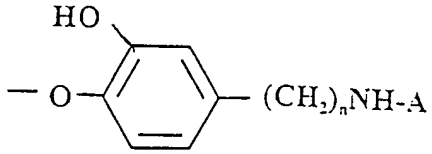


wherein R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl having 1 to 10 carbon atoms, fluoro, chloro and amino;

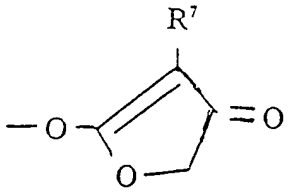
and R^5 and $R^{5'}$ are each selected from the group consisting of hydrogen having 1 to 10 carbon atoms, alkyl having 1 to 10 carbon atoms, alkoxyl having 1 to 10 carbon atoms, fluoro, and chloro;



wherein A is a covalently bonded amine protecting group, and n is 1-4;

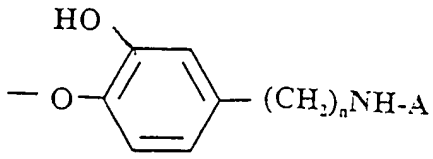


wherein X is a salt and n is 1-4;

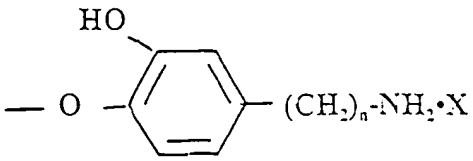


wherein R^7 is selected from the group consisting of alkyl having 1 to 10 carbon atoms, aryl and alkylaryl.

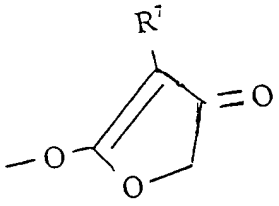
48. (Previously presented) The method of Claim 47 wherein R^2 is



49. (Previously presented) The method of Claim 47 wherein R^2 is



50. (Previously presented) The method of Claim 47 wherein R^2 is



51. (Previously presented) The method of Claim 47, wherein in the structure:

R^1 is selected from isopropyl or iso-butyl;

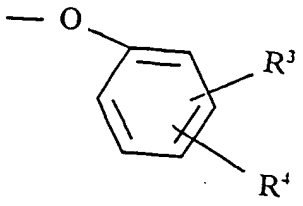
R^2 is -F; and

R^5 is hydrogen.

52. (Previously presented) The method of Claim 47 wherein, in the structure

R^1 is selected from isopropyl or isobutyl;

R^2 is

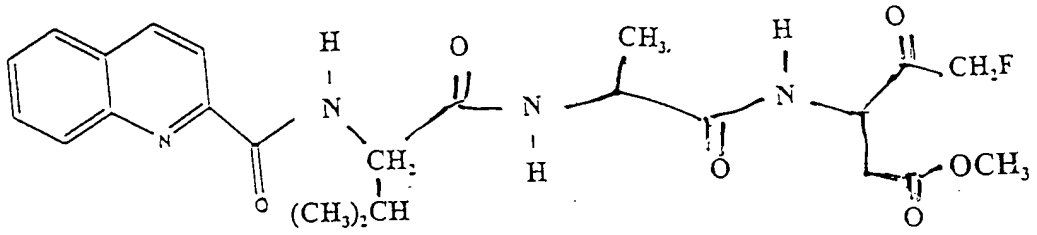


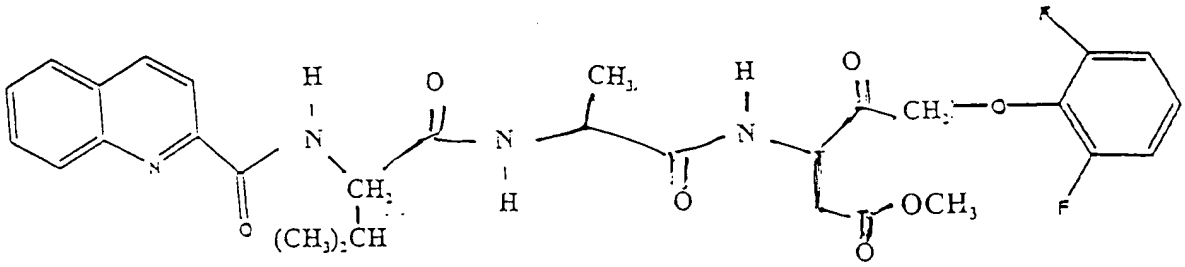
wherein R^3 and R^4 are each fluoro; and R^5 is hydrogen.

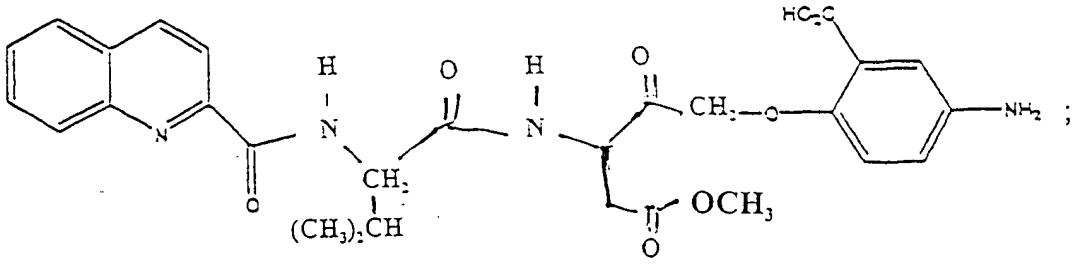
53. (Previously presented) The method of Claim 47 wherein in the structure, groups R^3 and R^4 are in the 2 and 6 positions of the phenyl ring.

54. (Currently amended) A method ~~of Claim 39~~ for caspase inhibition according to claim 38 wherein ~~inhibitor, which method comprises:~~

~~(a)~~ a compound is selected from the group consisting of:







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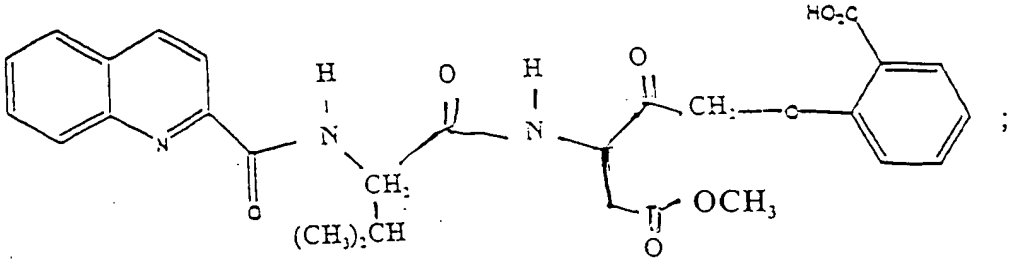

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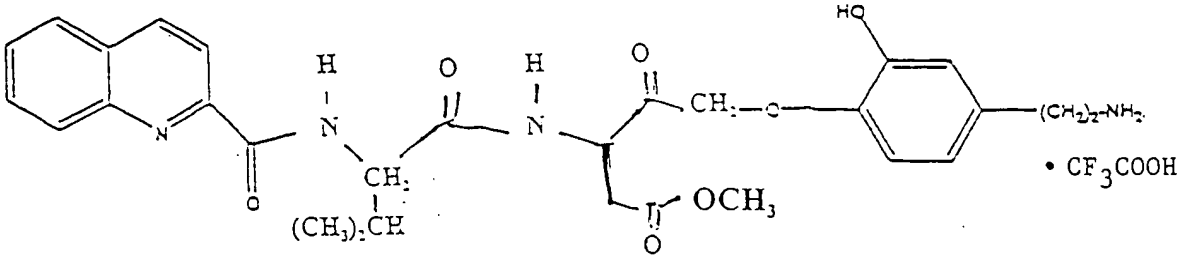

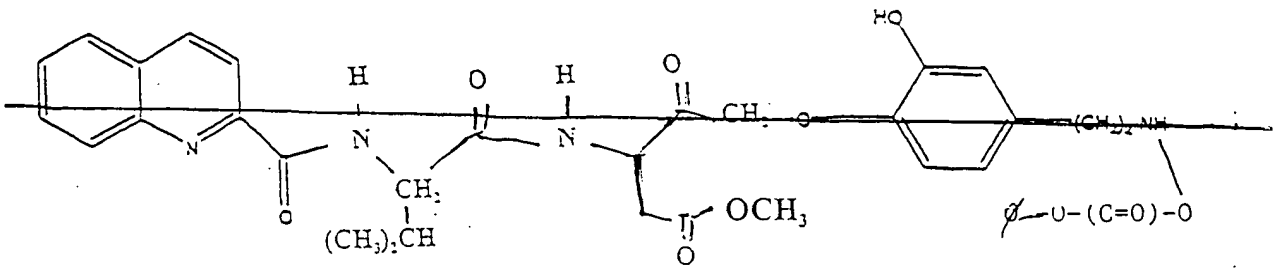

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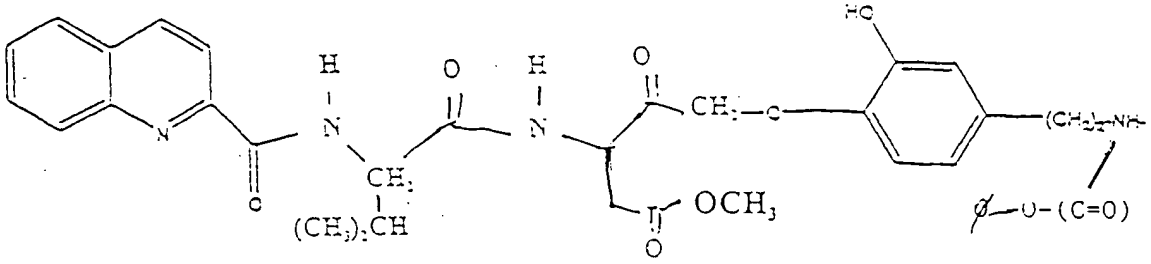

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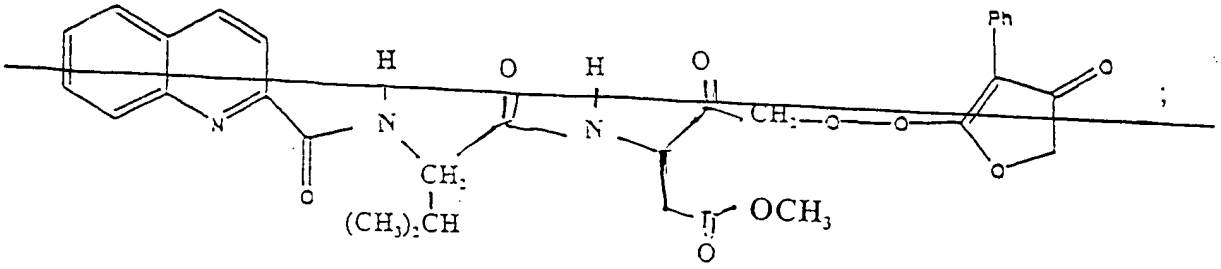

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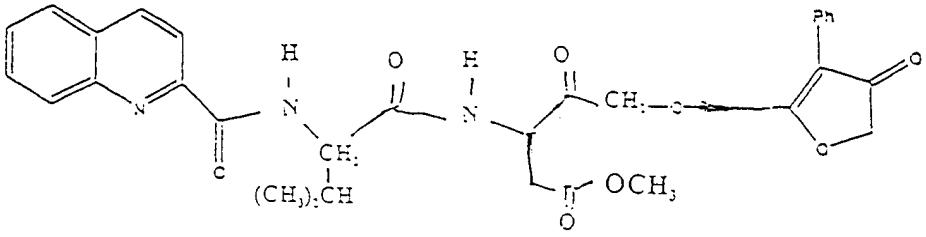

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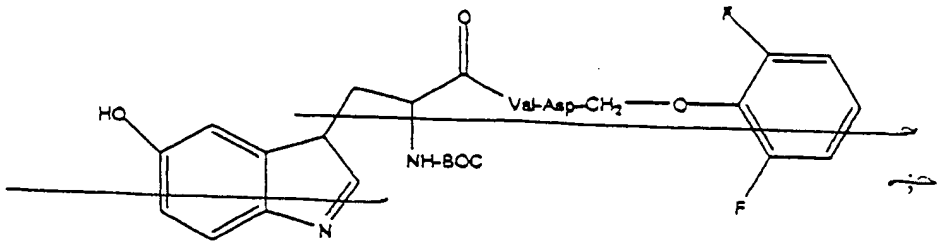
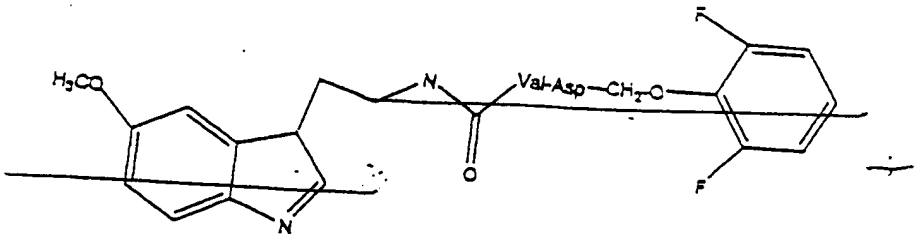
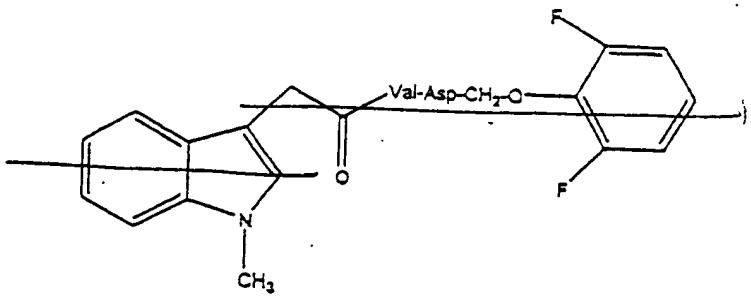
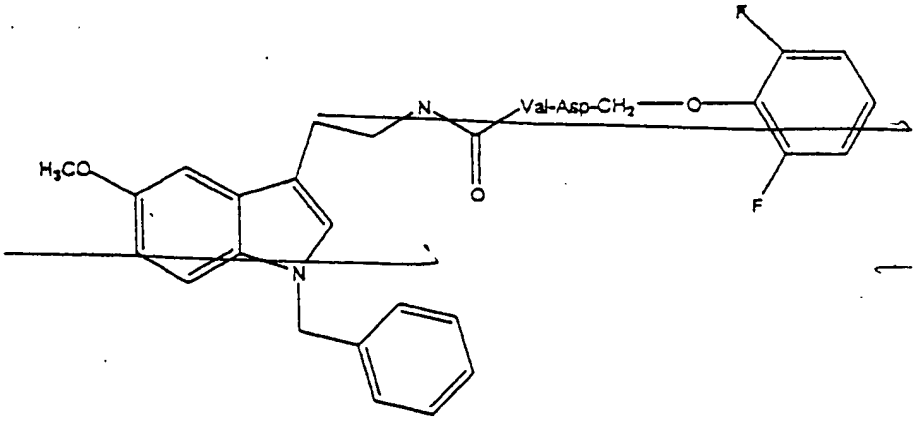
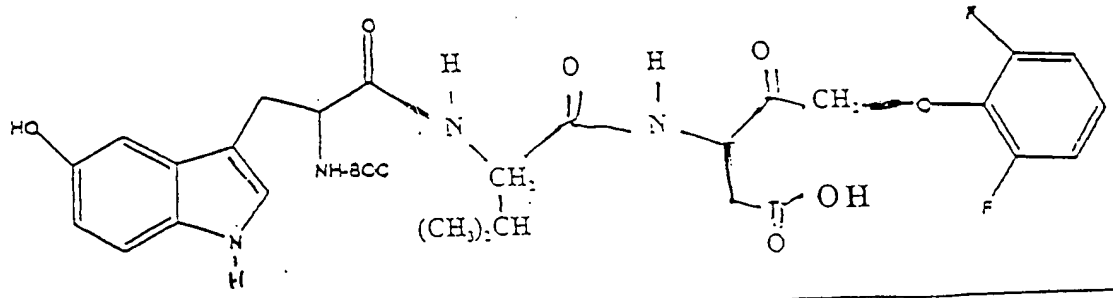

HO
NH-BOC
Val-Asp-CH2
O
F
N


H3CO
N
Val-Asp-CH2-O
O
F
N


Val-Asp-CH2-O
O
F
N
CH3

; and


N
Val-Asp-CH2
O
O
F
H3CO
N



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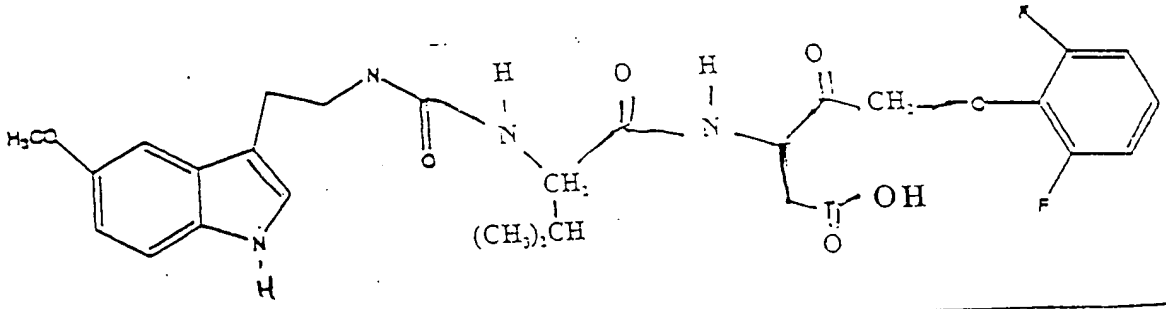

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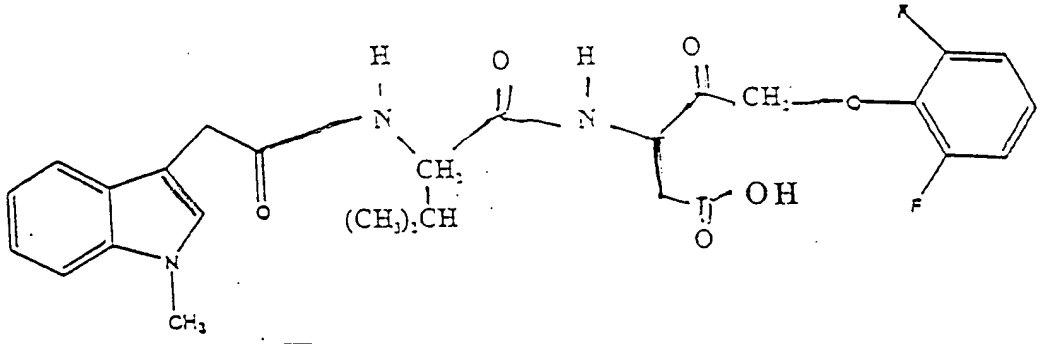
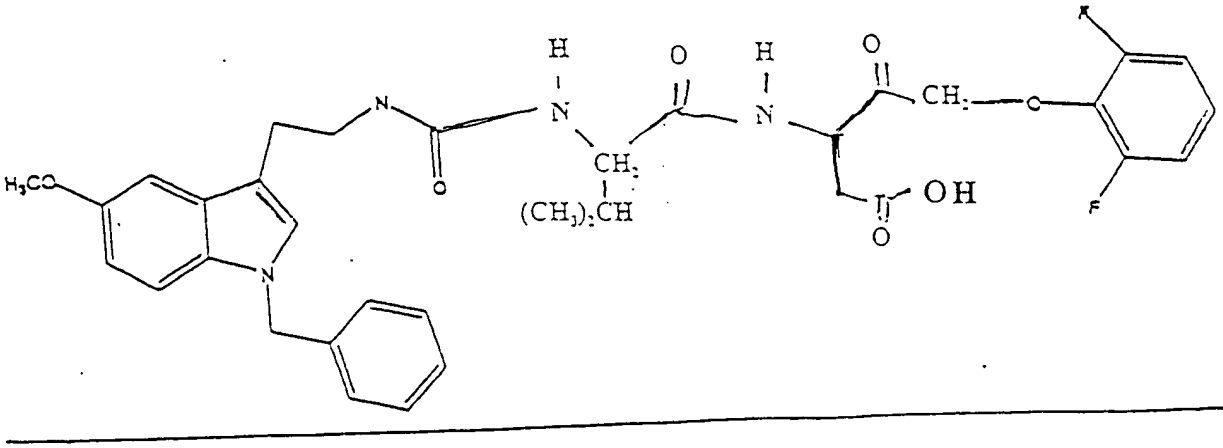
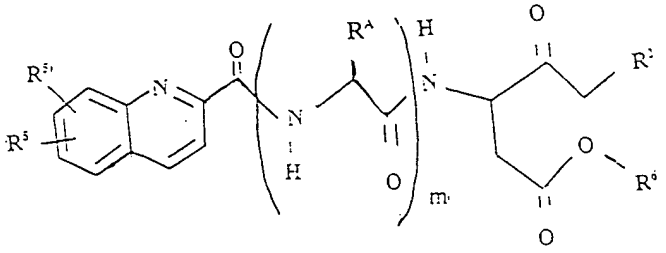


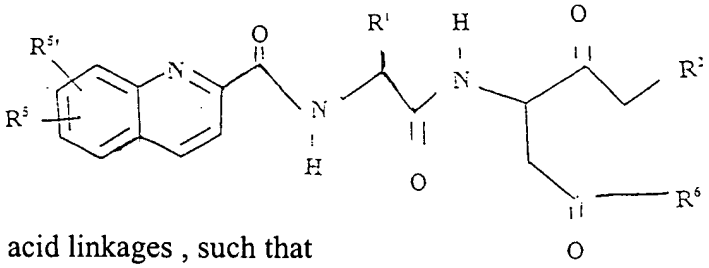
; and



55. (Currently amended) A compound of the structure selected from:



or



~~wherein in Structure III:~~

m is 1, 2 or 3, creating 1, 2 or 3 amino acid linkages , such that

when m = 1, $R^A = R^1$,

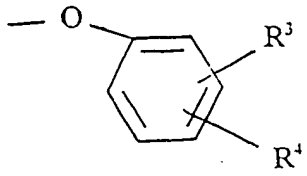
when m = 2, R^A is R^1 and R^{1B} in the separate amino acids and

when m = 3, R^A is R^1, R^{1B} and R^{1C} wherein R^1, R^{1B} and R^{1C} in the separate amino acids which amino acids are the same or different amino acid when R^1, R^{1B} and R^{1C} are independently selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl which group -N-CH (R^1)-(C=O)- ; N-CH(R^1)-(C=O)-NH-CH(R^{1B})-(C=O) ; or NCH(R^1)(C=O)-NH-CH(R^{1B})(C=O)-NHCH(R^{1C})(C=O)- produces natural amino acid structures or an unnatural amino acid structures, and;

the carbon adjacent to R^1 group is in the D or L configuration;

R^2 is selected from the group consisting of:

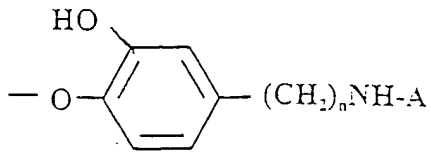
- F; and



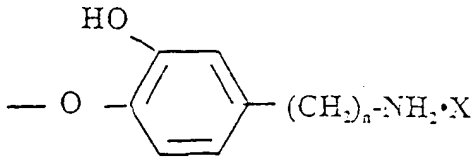
wherein R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, fluoro, chloro, carboxyl, alkoxy, alkyl carbonyl, aryl carbonyl, and amino;

and R^5 and $R^{5'}$ are each independently selected from hydrogen, alkyl, alkoxy, fluoro, chloro, carboxy, alkyl carbonyl, aryl carbonyl, amino ~~and~~ or R^5 and $R^{5'}$ together form a 5 or 6 member carbo cyclic ring structure or a 5 or 6 member heterocyclic ring structure; and

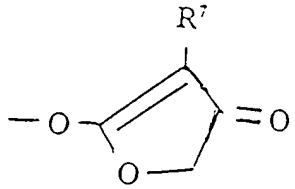
R^6 is selected from alkyl having 1 to 10 carbon atoms, aryl or substituted aryl;



wherein A is a covalently bonded amine protecting group, and
n is 1-4, preferably 2;



where X is a salt, and
n is 1-4, preferably 2; and



wherein R^7 is selected from the group consisting of alkyl having 1 to 10 carbon atoms, aryl and alkylaryl or the acid or base salts thereof.

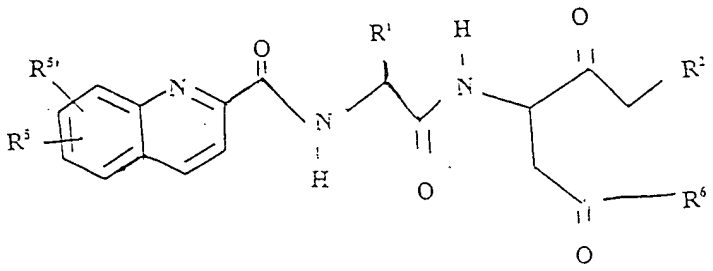
56. (Previously presented) The compound of Claim 55 wherein m = 2, R^1 and R^{1B} are each independently selected from methyl, ethyl, isopropyl and t-butyl.

57. (Previously presented) The compound of Claim 55 wherein m = 3 , R^1, R^{1B} and

R^{1C} are each independently selected from methyl, ethyl, isopropyl and t-butyl.

58. (Previously presented) The compound of Claim 57 wherein R^2 is F or 2,6-difluorophenoxy, R^5 and $R^{5'}$ are each hydrogen and R^6 is methyl.

59. (Currently amended) ~~A caspase inhibitor as as a composition comprising: a compound selected from the structure:~~ A composition comprising a caspase inhibitor of the following structure in combination with a pharmaceutically acceptable carrier,



wherein

m is 1, 2 or 3, creating 1, 2 or 3 amino acid linkages , such that

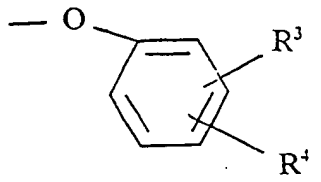
when m = 1, $R^A = R^1$,

when m = 2, R^A is R^1 and R^{1B} in the separate amino acids and

when m = 3, R^A is R^1, R^{1B} and R^{1C} wherein R^1, R^{1B} and R^{1C} in the separate amino acids which amino acids are the same or different amino acid when R^1, R^{1B} and R^{1C} are independently selected from the group consisting of alkyl, substituted alkyl, aryl, and substituted aryl which group -N-CH (R^1)-(C=O)- ; N-CH(R^1)-(C=O)-NH-CH(R^{1B})-(C=O) ; or NCH(R^1)(C=O)-NH-CH(R^{1B})(C=O)-NHCH(R^{1C})(C=O)- produces natural amino acid structures or an unnatural amino acid structures, and;

the carbon adjacent to R^1 group is in the D or L configuration;

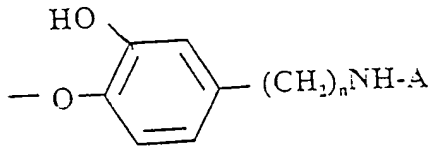
R^2 is selected from the group consisting of:

- F; and 

wherein R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, fluoro, chloro, carboxyl, alkoxy, alkyl carbonyl, aryl carbonyl, and amino;

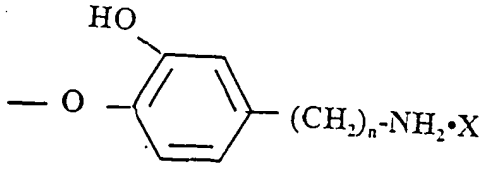
and R^5 and $R^{5'}$ are each independently selected from hydrogen, alkyl, alkoxy, fluoro, chloro, carboxy, alkyl carbonyl, aryl carbonyl, amino ~~and~~ or R^5 and $R^{5'}$ together form a 5 or 6 member carbo cyclic ring structure or a 5 or 6 member heterocyclic ring structure; and

R^6 is selected from alkyl having 1 to 10 carbon atoms, aryl or substituted aryl;



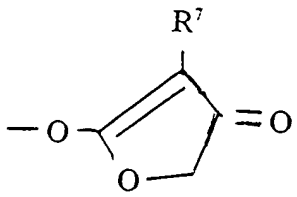
wherein A is a covalently bonded amine protecting group, and

n is 1-4, preferably 2;



where X is a salt, and

n is 1-4, preferably 2; and



wherein R^7 is selected from the group consisting of alkyl having 1 to 10 carbon atoms, aryl and alkylaryl or the acid or base salts thereof.

60. (Currently amended) The ~~easpase inhibitor~~ composition of Claim 59 wherein m = 2, R^1 and R^{1B} are each independently selected from methyl, ethyl, isopropyl ~~and~~ or t-butyl.

61. (Currently amended) The ~~easpase inhibitor~~ composition Claim 59 wherein m = 3 , R^1, R^{1B} and R^{1C} are each independently selected from ~~methyl, ethyl, isopropyl and t-butyl~~ methyl or ethyl.

62. (Currently amended) The ~~easpase inhibitor~~ composition Claim 59 wherein R^2 is F or 2,6-difluorophenoxy, R^5 and $R^{5'}$ are each hydrogen and R^6 is methyl.

~~63.~~ (Currently amended) The ~~easpase inhibitor~~ composition Claim 62 wherein R^2 is ~~F or~~ 2,6-difluorophenoxy, R^5 and $R^{5'}$ are each hydrogen and R^6 is methyl.

64. (Currently amended) ~~The~~ A method of treatment for a human being diagnosed as having arthritis, septic shock, respiratory diseases, inflammatory condition, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, reperfusion injury, ischemic diseases, myocardial infarction, stroke, ischemic kidney disease ~~immune based diseases~~, hypersensitivity, multiple sclerosis, bone diseases; and neurodegenerative diseases, Alzheimer's, Amyltrophic Lateral Sclerosis (ALS), Huntington's disease, Parkinson's disease, meningitis, and spinal chord injuries which method comprises:

~~A. Administering~~ administering an effective amount of the composition ~~easpase inhibitor~~ of claim 59.

65. (Currently amended) ~~The~~ A method of treatment of claim 47 of a human being diagnosed as having arthritis, metastases, meningitis, salpingitis, septic shock, respiratory diseases, inflammatory condition, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, reperfusion injury, ischemic diseases, myocardial infarction, stroke, ischemic kidney

disease ~~immune-based diseases~~, hypersensitivity, multiple sclerosis, bone diseases; and neurodegenerative diseases, Alzheimer's, Amyltrophic Lateral Sclerosis (ALS), Huntington's disease, Parkinson's disease, meningitis, spinal chord injuries and liver damage, traumatic brain injury, which method comprises:

~~A. Administering~~ administering an effective amount of the composition ~~caspase inhibitor~~ of claim 60.

66. (Currently amended) ~~The~~ A method of treatment of a human being diagnosed as having arthritis, metastases, meningitis, salpingitis, septic shock, respiratory diseases, inflammatory condition, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, reperfusion injury, ischemic diseases, myocardial infarction, stroke, ischemic kidney disease immune-based diseases, hypersensitivity, multiple sclerosis, bone diseases; and neurodegenerative diseases, Alzheimer's, Amyltrophic Lateral Sclerosis (ALS), Huntington's disease, Parkinson's disease, meningitis, spinal chord injuries and liver damage, traumatic brain injury, alopecia, AIDS and toxin induced liver disease, which method comprises:

~~A. Administering~~ administering an effective amount of the composition ~~caspase inhibitor~~ of claim 61.

67. (Previously presented) The method of treatment of claim 54 of a human being diagnosed as having arthritis, metastases, meningitis, salpingitis, septic shock, respiratory diseases, inflammatory condition, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, reperfusion injury, ischemic diseases, myocardial infarction, stroke, ischemic kidney disease ~~immune-based diseases~~, hypersensitivity, multiple sclerosis, bone diseases; and neurodegenerative diseases, Alzheimer's, Amyltrophic Lateral Sclerosis (ALS), Huntington's disease, Parkinson's disease, meningitis, spinal chord injuries and liver damage, traumatic brain injury, alopecia, which method comprises:

~~A. Administering~~ administering an effective amount of the composition ~~caspase inhibitor~~ of claim 60.

68. (Currently amended) ~~The~~ A method of treatment of claim 59 of a human being diagnosed as having arthritis, metastases, meningitis, salpingitis, septic shock, respiratory diseases, inflammatory condition, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, reperfusion injury, ischemic diseases, myocardial infarction, stroke, ischemic kidney disease ~~immune-based diseases~~, hypersensitivity, multiple sclerosis, bone diseases; and neurodegenerative diseases, Alzheimer's, Amyltrophic Lateral Sclerosis (ALS), Huntington's disease, Parkinson's disease, meningitis, spinal chord injuries and liver damage, and traumatic brain injury, which method comprises:

~~A. Administering~~ administering an effective amount of the composition ~~easpase inhibitor~~ of claim 62.

69. (Currently amended) ~~The~~ A method of treatment of a human being diagnosed as having arthritis, metastases, meningitis, salpingitis, septic shock, respiratory diseases, inflammatory condition, cholangitis, colitis, encephalitis, endocerolitis, hepatitis, pancreatitis, reperfusion injury, ischemic diseases, myocardial infarction, stroke, ischemic kidney disease ~~immune-based diseases~~, hypersensitivity, multiple sclerosis, bone diseases; and neurodegenerative diseases, Alzheimer's, Amyltrophic Lateral Sclerosis (ALS), Huntington's disease, Parkinson's disease, meningitis, spinal chord injuries and liver damage, and traumatic brain injury, which method comprises:

~~A. Administering~~ administering an effective amount of the composition ~~easpase inhibitor~~ of claim 63.

70. (Cancelled)